

# COLOMBIA

By Ivette E. Torres

Mines and hydrocarbons represented 4.4% of the gross domestic product (GDP) in 2002. This sector was dominated by hydrocarbons, which was Colombia's most important export. The combined mines and hydrocarbons decreased by 11.06%; alone, mines decreased by 6.25%. The decrease was despite increased production and the higher average price of ferronickel. The construction sector, which represented 4.7% of the GDP, increased by 5.8%. The industrial sector, which represented 14% of the GDP, increased by 1.1% (Ministerio de Minas y Energía, 2003, p. 85).

The economy of Colombia grew at a moderate pace as indicated by a 1.9% increase of the GDP (Latin Focus, 2003§<sup>1</sup>). The GDP in 2002 was estimated to be \$82.2 billion. That figure made Colombia the 41st largest economy in the world (World Bank, 2003b§). In terms of purchasing power parity, it was the 27th largest economy with \$265.5 billion (World Bank, 2003a§). Colombia had a high rate of unemployment and was affected by the overall world economic stagnation. Since the late 1990s, when the GDP increased by 0.6% (1998) and decreased by 4.2% (1999), the country restructured its financial system and made other significant changes that have resulted in a lower rate of inflation. In August 2002, a new Government took office. The new Government put a great deal of energy into reducing the country's external debt, which had reached 50.7% of the GDP, in part, because of the depreciation of the currency. Among other things, the Government approved reductions in the budget for fiscal year 2003, and the Congress passed important fiscal changes aimed at decreasing Government spending and increasing Government revenues. The Government planned to restructure by reducing the size and number of Government agencies and the number of its civil workforce (Banco de la República and Ministerio de Hacienda y Crédito Público, 2002). In January 2003, the International Monetary Fund approved a 2-year Stand-By Agreement with Colombia (International Monetary Fund, 2003). Despite these important changes, Colombia continued to be affected by violence, especially after peace talks between the Government and guerrillas broke down in early 2002. In April, the guerrilla group Ejército de Liberación Nacional (ELN) declared the Government and some of the private petroleum companies to be military targets. In the past, guerrilla groups had concentrated their attacks on pipelines. With this announcement, the ELN indicated that the attacks would expand to all other infrastructure (Oil and Gas International, 2002§).

Colombia's mineral production was dominated by the fuel sector. The country was the fifth largest producer of petroleum in Latin America (BP p.l.c., 2003b§). Colombia was also the largest producer of coal in the region. Historically, the country has been recognized as an important producer and the world's leading exporter of emerald. In addition, the country was an important producer of ferronickel and the only producer of platinum in Latin America. It also produced bauxite, copper, iron ore, lead, steel, silver, and zinc. It was an important producer of cement in Latin America and produced small amounts of construction materials and industrial minerals (table 1).

## Government Policies and Programs

In 2002, the Ministerio de Minas y Energía evaluated many changes in its organizational structure and that of the entities reporting directly to the Ministerio and of those associated with it. In accordance to Article 320 of Ley 865 of 2001 (the mining law), the Ministerio sought to continue to delegate some functions to the states in an effort to expedite the administration of local mineral resources.

During the year, Decreto 2390 was passed. The purpose of the decree was to legalize the informal mining activity (*minería de hecho*) for mining activity that could be technically and environmentally sustainable.

A new royalty law (Ley 756 de Regalías) was also passed during the year. The law modified Ley 141 of 1994. Article 16 of the new law establishes the royalty to be paid for the production of minerals at the mine mouth. Royalties for minerals except petroleum range from 1% to 12%. For coal, the royalty rate is 10% for mining companies that produce more than 3 million metric tons per year (Mt/yr) and 5% for those that produce below that level. The highest levels of royalty are for nickel and salt (12%). Radioactive minerals have a royalty rate of 10%. In general, metallic minerals have a royalty rate of 5%. The rate for gold and silver, however, is 4% with the exception of alluvial gold in concession contracts, which has a rate of 6%. Royalties for nonmetallic minerals and construction materials are 3% and 1%, respectively.

The royalty law established a system of variable royalty payments of between 8% and 25% for the oil sector; the amount was based on the level of production. The law would be applicable to new discoveries, discovered but not developed fields, and projects of incremental production. The law provides stimulus for development of new gas and heavy crude fields. Subsequently, the Government, through Decreto 3176, regulated Articles 3 and 10 of Ley 756. The decree also defines the term "incremental production." The Government also was working on several reforms by decrees of new law projects to address the issue of theft of petroleum and natural gas (Ministerio de Minas y Energía, 2003, p. 70-76).

---

<sup>1</sup> References that include a section mark (§) are found in the Internet Reference Cited section.

In November 2002, the Government and the petroleum industry formed a working group with the purpose of accelerating the pace and increasing the exploration activity in Colombia to fight the illegal market of natural gas, petroleum, and petroleum derivatives (Ministerio de Minas y Energía, 2003, p. 69). Also, the group, which was represented by various ministries (including the Ministerio del Medioambiente), the Government petroleum producer Empresa Colombiana de Petróleos, S.A. (ECOPETROL), and the Asociación Colombiana de Petróleo, which represented the private sector, was working on accelerating the terms of granting environmental and other permits. Another topic for the working group to evaluate was ways in which ECOPETROL could work to foster new investment by the private sector.

## **Environmental Issues**

The Ministerio del Medioambiente is Colombia's highest Government authority with responsibility for environmental matters. The Corporaciones Autónomas are responsible for administering natural resources and controlling environmental deterioration associated with production activities, such as mining.

Under Decreto 266/2000, the time allowed for a project's environmental evaluation was reduced, thus decreasing the licensing process for mining projects. As means of protecting indigenous and black communities, the decree also requires the Government entity Instituto Geográfico Agustí Codazzi to produce a map of the areas occupied by indigenous and black communities before project development can begin.

In 1999, the Ministerio del Medioambiente adopted several environmental management plans for prospecting (Resolución 1167), mining and cement manufacturing (Resolución 1168), industrial minerals (Resolución 1169), production of sedimentary materials (Resolución 1170), and production of gold (Resoluciones 1171 and 1172) (Empresa Nacional Minera Ltda., Instituto de Información e Investigación Geocientífica Minero-Ambiental y Nuclear, and Unidad de Planeación Minero-Energética, 2000, p. 19-21).

## **Production**

In terms of production value (after petroleum), coal, emerald, gold, and platinum were Colombia's principal minerals. In 2002, the production value of these minerals totaled \$1.25 billion. The values of coal and nickel (ferronickel) production were 50.7% and 24.4% of the total, respectively. For the most part, production levels of the minerals canvassed by the Government decreased from those of 2001 with the exception of ferronickel and iron ore, which increased by 14.4% and 4.9%, respectively (Ministerio de Minas y Energía, 2003, p. 81-82).

## **Trade**

Colombia's total exports were estimated to be \$12.06 billion. Petroleum exports totaled \$3.28 billion and represented about 27% of total exports. Total imports were \$13 billion. Despite Colombia being a net exporter of petroleum, it imported \$233 million in petroleum products. The United States was Colombia's main trading partner followed by the Andean Community countries and the European Union.

Mineral exports (excluding petroleum) totaled \$1.97 billion, or 16.3% of total exports. Coal was the largest export item with \$1.01 billion, which was a 14.6% decrease compared with that of 2001. The main areas of export for Colombian coal were Europe (55%) and North America (31%). Exports of ferronickel totaled \$268.3 million; this was an increase of 14.1% compared with that of 2001. Official export of emeralds remained at the same level as that of 2001. Exports of gold, however, increased by 72% despite a lower production level (Ministerio de Minas y Energía, 2003, p. 83).

Colombia exported about 40 crude minerals and more than 10 processed minerals. In 2002, exports of platinum totaled \$8.85 million. All platinum was exported to the United States. The value of exports of dimension stone (marble and granite) was \$4.29 million. Exports of cement, ceramics, and coke were \$73 million, \$38.9 million, and \$16.3 million, respectively (Ministerio de Minas y Energía, 2003, p. 83).

## **Industry Structure**

The Ministerio de Minas y Energía y Minas was the Government entity entrusted with the oversight of the minerals and energy sectors. Several agencies either report directly to the Ministerio or are associated with it; some of these are the Dirección de Energía, the Dirección de Gas, the Dirección de Hidrocarburos, the Dirección de Minas, Empresa Colombiana de Gas, ECOPETROL, Ingeominas, Minercol Ltda., and the Unidad de Planeación Minero Energética.

The production of minerals and energy was by the public and private sectors. Coal and nickel were produced in their entirety by the private sector. Natural gas and petroleum were produced by the Government through ECOPETROL and in partnership with the private companies with direct contracts between ECOPETROL and the companies. By law, ECOPETROL has to have a minimum of 30% in joint ventures with the private sector, which owned and operated the country's petroleum refinery production.

## Commodity Review

### *Metals*

**Gold.**—Gold production in 2002 decreased by 4.6% from that of 2001 to 20,799 kilograms (kg) (table 1). Three departments, Antioquia, Bolivar, and Cordoba, produced 90% of the total (Unidad de Planeación Minero Energética, 2003, p. 4). Antioquia produced more than 50% of the total (Ministerio de Minas y Energía, 2003, p. 241). Most of Colombia's gold production was from small- and medium-sized alluvial operations, which used artisanal methods for extraction. Colombia's largest alluvial operation was El Bagre in the Rio Nechi, which was owned by the domestic producer Mineros de Antioquia, S.A., which had been partially owned by Corona Goldfields of Canada.

**Iron and Steel.**—Colombia was Latin America's seventh largest producer of steel and had an output of 662,500 metric tons (t) during 2002. The only integrated steel producer in Colombia was Acerías Paz del Río, S.A., which had a capacity of about 400,000 metric tons per year (t/yr), but the company has been producing at levels of less than 300,000 t/yr. It has been under financial restructure because of high debt. In early 2003, the Government and the employees were trying to reach an agreement to save the company from liquidation (Presidencia de la República, 2003).

**Nickel.**—Cerro Matoso, S.A. was Colombia's only producer of ferronickel. The mine and ferronickel producer was located in Montelibano, in the Cordoba Department. The company was owned by BHP Billiton plc. In 2002, Cerro Matoso produced ferronickel with a nickel content of 43,987 t (table 1). This was about 80% of the company's production capacity, which had been expanded in early 2001 (BHP Billiton plc, 2003§).

### *Industrial Minerals*

**Cement.**—Colombia was Latin America's third largest producer of cement after Brazil and Mexico. Production in 2002 decreased by 3% to 6.6 Mt. Since 1998, production has decreased by 28%. The largest cement producer in Colombia was Sindicato Antioqueño with 53% of Colombia's market share. CEMEX, S.A. de C.V., which was one of the world's largest cement companies, was Colombia's second largest producer with five cement plants and a total capacity of 4.8 Mt/yr (CEMEX, S.A. de C.V., 2001§).

**Gemstones (Emerald).**—Official production of emerald, which was based on export data, decreased by 2% after a 35% decrease in 2001. According to Government estimates, 10% of the emerald was sold in the country, and 90% was destined for export. Emerald deposits in Colombia are located in the central region of the country in the sedimentary basin of the Cordillera Oriental. Production was from two Departments, Boyaca and Cundinamarca in the Cinturon Esmeraldífero Oriental (Eastern Emerald Belt) and Cinturon Esmeraldífero Occidental (Western Emerald Belt) regions with a combined area of 730,000 hectares. More than 60 production licenses awarded by the Government were active (Empresa Nacional Minera Ltda., undated§).

**Salt.**—Production of salt in 2002 was 527,337 t, of which 335,783 t was marine salt (table 1). This was a 33.4% increase compared with that of 2001. In October 2002, Minercol Ltda. opened a bidding process to offer salt concessions in the areas of Galerazamba (Bolívar Department), Nemocon (Cundinamarca Department), Upin (Meta Department), and Zipaquirá (Cundinamarca Department). Because the process was unclear or because information on several relevant issues was incomplete, the assignment of these concessions was halted, and Minercol nullified the offer in early 2003. The Government expected to offer the areas again in mid-2003.

### *Mineral Fuels*

**Coal.**—Colombia, which was the largest producer of coal in Latin America, decreased its coal production by about 9% to 39.5 million metric tons (Mt) in 2002. Cerrejon Zona Norte, which was the largest producer and the largest open pit coal mine in the world, became a joint venture of Anglo American Plc., BHP Billiton, and Glencore International AG after they acquired 100% of International Colombia Resources Corp. (Intercor), which was the mine operator. In 2000, the consortium purchased 50% from the Government, and the remaining 50% was owned by ExxonMobil Corporation until the company agreed to sell its share of Intercor to the consortium in early 2002. With the purchase, the consortium, which also owned Carbones del Cerrejón, S.A., controlled about 22 Mt/yr of Colombia's coal production capacity. In 2002, production from the new Carbones del Cerrejón (including the production from Cerrejon Zona Centro, Cerrejon Zona Norte, Cerrejon Zona Sur, and Oreganal Mines) totaled 19.5 Mt; of this, Cerrejon Zona Norte produced 15.3 Mt. The combined output was almost 50% of Colombia's output in 2002 and a 6% decrease compared with the production level achieved in 2001, which totaled 20.8 Mt. With the acquisition of Cerrejon Zona Norte, the consortium's reserves were 400 Mt proven and 550 Mt probable (Mining Magazine, 2002a). The new integrated company exported 18.5 Mt of thermal coal mainly to Europe (64%), and North America (18%); the remaining 18% was exported to Latin American, Caribbean, and Mediterranean countries (Carbon del Cerrejón, 2003§). In midyear, Carbones del Cerrejón announced that it was investing \$11.4 million to explore and develop the Patilla deposit, which is also located in the Guajira Department. A 30-year exploration and production contract for the Patilla deposit had been awarded to Intercor and the Cerrejon Zona Norte in 2001. The Government

estimated Patilla's reserves to be 65 Mt (Mining Magazine, 2002b; Corporación Invertir en Colombia, 2001§). Production from Patilla was expected to be 3 to 4 Mt/yr.

In May, a train carrying coal from Cerrejon was bombed. The attack temporarily blocked transportation of 7,000 metric tons per day of coal from the mine to the Port of Bolivar. Coal producers have been the target of these attacks in the past. Another coal company, Drummond Ltd., which was a subsidiary of Drummond Co. Inc. of the United States, had been attacked more than 12 times in a period of 2 years (Dow Jones Newswires, 2002§).

**Natural Gas.**—By yearend 2002, Colombia's proven natural gas reserves decreased by 4.4% to 201 billion cubic meters (reported as 7,188 billion cubic feet) compared with those of 2001. Of these reserves, 97% was in private associations with the Government through ECOPETROL, and 3% was in ECOPETROL's direct production operations.

The largest producer of natural gas in Colombia was Texas Petroleum Company, which was a subsidiary of ChevronTexaco Corp. Texas Petroleum, in association with ECOPETROL, produced natural gas from two platforms in the Chuchupa offshore field and from the Ballena onshore field. The association produced 80% of Colombia's natural gas requirements (ChevronTexaco Corp., 2003§).

The Government of Colombia's plan for 2002 to 2006 called for consolidating the natural gas market. As part of the plan, the Government wanted to develop an integrated regional market with Venezuela and Central America. In an effort to expand the natural gas service, investment in transportation and distribution of natural gas would be necessary. For that, mechanisms to encourage investment by regional entities were being developed (Ministerio de Minas y Energía, 2003, p. 146).

**Petroleum.**—At yearend 2002, Colombia's petroleum reserves totaled 1.6 billion barrels (Bbbl) (Ministerio de Minas y Energía, 2003, p. 41). Production during the year totaled 211 million barrels (Mbbbl); this was a 4.3% decrease from that of 2001. At this production rate, crude petroleum reserves would be depleted in about 8 years. Because hydrocarbons has been Colombia's leading economic subsector for several years, the Government has focused its efforts on increasing foreign investment in exploration and production of crude petroleum and its associated natural gas and increasing the production and productivity of the refineries. The results, however, have been limited because of issues regarding security of infrastructure and production facilities.

BP plc. and Occidental Petroleum Corp. were the two largest private producers in Colombia that worked in association with the Government. BP was the operator of the Cupiagua and Cusiana oilfields. The company produced about 40% of the country's crude petroleum output (BP p.l.c., 2003a§). Occidental was the operator of the Cano Limon oilfield. These were Colombia's largest producing fields in 2002. Cupiagua produced 21.7% of the total output; Cusiana, 18.1%; and Cano Limon, 12.2%. Decreased production at the Cupiagua and Cusiana fields was the main reason for the declining Colombian production of crude petroleum. In addition to lower production, output was affected by theft and attacks on infrastructure. During the year, there were 41 attacks on the infrastructure (Ministerio de Minas y Energía, 2003, p. 66; Alexander's Gas & Oil Connections, 2003§; U.S. Energy Information Administration, 2003§).

Government policies for 2002 to 2006 were framed by the Plan Nacional de Desarrollo; the objectives were to advance the economic sustainable development of the subsector in a secure environment (Ministerio de Minas y Energía, 2003, p. 38). The plan called for increasing the petroleum reserves by 1 Bbbl during this period through increasing foreign and national private investment. One of the strategies included in the plan was to study new forms of Government-private sector contracts of associations, which have become important to Colombia's exploration and production of hydrocarbons. Part of the study would evaluate the possibility of extending such contracts to span the entire economic life of the deposits and many other aspects of this type of contract. In 2002, contracts of association represented 77% of the exploration area and 59% of the production area. The Government had direct involvement in exploration (23%) and production (32%) through ECOPETROL.

**Refinery Products.**—Despite Colombia being a net exporter of crude petroleum, it was an importer of refinery products (mainly gasoline). In 2002, the country operated four refineries with a production capacity of 128.6 billion barrels per year. Capacity utilization for the year was 79%. The largest of the refineries was Barrancabermeja in the Department of Santander, which processed more than 70% of Colombia's crude petroleum during the year. The second largest was the Cartagena refinery in the Department of Bolivar with about 25% of Colombia's refinery capacity. Colombia's refining system was owned and operated by the Government through ECOPETROL (Ministerio de Minas y Energía, 2003, p. 51).

## Infrastructure

Colombia had 110,000 kilometers (km) of highways, of which 26,000 km was paved. The country had 10 major ports and harbors—Bahia de Portete, Barranquilla, Buenaventura, Cartagena, Leticia, Puerto Bolivar, San Andres, Santa Marta, Tumaco, and Turbo. The country's railway system covered 3,304 km. Coal production from the largest coal producers was transported by railway. The Cerrejon Norte line was used by Cerrejon Zona Norte and Carbones del Cerrejón. Drummond used a portion of the Atlantic Richfield Oil Corporation line for its transportation of coal. The smaller coal producers transported their coal by trucks and barges.

Colombia had five petroleum pipelines that covered a total of 3,585 km. Four of these pipelines—the 805-km Ocesa, the 788-km Cano Limon, the Alto Magdalena, and the Colombia—connected production fields to Covenas. The TransAndino pipeline transported petroleum from Colombia's Orito field to Tumaco Port in the Pacific. For several years, petroleum pipelines have been the targets of terrorist attacks. Petroleum products, natural gas, and natural gas liquids were also transported by pipelines.

In recent years, the Government has been planning infrastructure improvements and new developments. Slow economic growth, however, has curbed the progress made on these improvements.

## References Cited

- Banco de la República and Ministerio de Hacienda y Crédito Público, 2002, Acuerdo stand-by de Colombia con el Fondo Monetario Internacional [Stand-by agreement between Colombia and the International Monetary Fund]: Bogotá, Colombia, Banco de la República and Ministerio de Hacienda y Crédito Público, December 2, 20 p.
- Empresa Nacional Minera Ltda., Instituto de Información e Investigación Geocientífica Minero-Ambiental y Nuclear, and Unidad de Planeación Minero-Energética, 2000, Minerales estratégicos para el desarrollo de Colombia [Strategic minerals for Colombia's Development]: Empresa Nacional Minera Ltda., Instituto de Información e Investigación Geocientífica Minero-Ambiental y Nuclear, and Unidad de Planeación Minero-Energética, 133 p.
- International Monetary Fund, 2003, IMF approves a US\$2.1 billion stand-by agreement credit for Colombia: Washington D.C., International Monetary Fund press release no. 03/04, January 15, 4 p.
- Mining Magazine, 2002a, Consortium buys Cerrejón Norte: Mining Magazine, v. 186, no. 3, March, p. 151.
- Mining Magazine, 2002b, CZN invest in Patilla: Mining Magazine, v. 186, no. 6, June, p. 310.
- Ministerio de Minas y Energía, 2003, Memorias al congreso de la república 2002-2003 [Report to congress 2002-2003]: Bogotá, Colombia, Ministerio de Minas y Energía, July, 301 p.
- Presidencia de la República, 2003, Se salvo Paz del Río [Paz del Río was saved]: Bogotá, Colombia, Presidencia de la República, Government press release, July 10, 3 p.
- Unidad de Planeación Minero Energética, 2003, Investigación sobre las exportaciones colombianas de oro presumiblemente irregulares [Research of presumably irregular Colombian gold exports]: Bogotá, Colombia, Unidad de Planeación Minero Energética, September, 19 p.

## Internet References Cited

- Alexander's Gas & Oil Connections, 2003, Colombia country analysis brief, June 13, accessed July 11, 2003, at URL <http://www.gasandoil.com/goc/news/ntl32423.htm>.
- BHP Billiton Plc, 2003, Stainless steel materials operations, accessed November 7, 2003, at URL <http://www.bhpbilliton.com/bb/ourBusinesses/stainlessSteelMaterials/stainlessSteelMaterialsOperations.jsp?id=CustomerCentre/ProductGroups/StainlessSteelMaterials/CerroMatosaOperations.html>.
- BP p.l.c., 2003a, Colombia, accessed October 15, 2003, at URL [http://www.bp.com/in\\_your\\_area/transition\\_page.asp?id=17](http://www.bp.com/in_your_area/transition_page.asp?id=17).
- BP p.l.c., 2003b, Energy reviews, accessed October 16, 2003, at URL [http://www.bp.com/files/16/bp\\_stats\\_history\\_1611.xls](http://www.bp.com/files/16/bp_stats_history_1611.xls).
- Carbones del Cerrejón, S.A., 2003, Exports, accessed November 7, 2003, at URL [http://www.Cerrejoncoal.com/ingles/marketing/international\\_market/index.html](http://www.Cerrejoncoal.com/ingles/marketing/international_market/index.html).
- CEMEX, S.A. de C.V., 2001, Colombia, accessed July 28, 2002, at URL [http://www.cemex.com/gl/gl\\_co.asp](http://www.cemex.com/gl/gl_co.asp).
- ChevronTexaco Corp., 2003, ChevronTexaco in Latin America and the Caribbean, accessed October 15, 2003, at URL [http://www.chevrontexaco.com/operations/latin\\_america\\_caribbean](http://www.chevrontexaco.com/operations/latin_america_caribbean).
- Corporación Invertir en Colombia, 2001 (September 20), Intercor-CZN to develop Patilla coal deposit in the Guajira Province, accessed November 7, 2003, at URL [http://www.coinvertir.com/cliente/plantilla1.asp?pub\\_id=769&pag\\_id=1852](http://www.coinvertir.com/cliente/plantilla1.asp?pub_id=769&pag_id=1852).
- Dow Jones Newswires, 2002 (May 2), Colombian rebels bomb coal train; no injuries, accessed May 3, 2002, at URL [http://biz.yahoo.com/djus/020502/200205021139000607\\_1.html](http://biz.yahoo.com/djus/020502/200205021139000607_1.html).
- Empresa Nacional Minera Ltda., [undated], Análisis del mercado de esmeraldas en Colombia [Analysis of emerald market in Colombia], accessed July 17, 2002, at URL [http://minercol.gov.co/user\\_files/esmeraldas.pdf](http://minercol.gov.co/user_files/esmeraldas.pdf), 18 p.
- Latin Focus, 2003, Colombia indicators real sector 1998-2003, accessed October 1, 2003, at URL <http://www.latin-focus.com/latinfocus/countries/colombia/coleireal.htm>.
- Oil and Gas International, 2002 (April 11), Colombia rebels targeting oil companies, accessed April 16, 2002, at URL [http://www.oilandgasinternational/world\\_industry\\_news/apr02\\_rebels.html](http://www.oilandgasinternational/world_industry_news/apr02_rebels.html).
- U.S. Energy Information Administration, 2003, Colombia, Country Analysis Brief, accessed August 19, 2003, at URL <http://www.eia.doe.gov/emeu/cabs/colombia.html>.
- World Bank, 2003a (July), PPP GDP 2002, World Development Database, accessed November 7, 2003, at URL [www.worldbank.org/data/databytopic/GDP\\_ppp.pdf](http://www.worldbank.org/data/databytopic/GDP_ppp.pdf).
- World Bank, 2003b (July), Total GDP 2002, World Development Database, accessed November 7, 2003, at URL [www.worldbank.org/data/databytopic/GDP.pdf](http://www.worldbank.org/data/databytopic/GDP.pdf).

## Major Sources of Information

- Cerro Matoso, S.A.  
Carr. 7a No. 26-20, Piso 8  
Santa Fe de Bogotá, D.C., Colombia  
Telephone: (571) 288-7066  
Fax: (571) 285-7974
- Empresa Colombiana de Petróleos, S.A.  
CRA 7 No. 36-24  
Santa Fe de Bogotá, D.C., Colombia  
Telephone: (571) 285-6400
- Instituto de Fomento Industrial  
Calle 16 No. 6-66, Piso 7  
Santa Fe de Bogotá, D.C., Colombia  
Telephone: (571) 282-2055  
Fax: (571) 286-8166
- Instituto de Información e Investigación Geocientífica Minero-Ambiental y Nuclear  
Diagonal 53, No. 34-53  
Santa Fe de Bogotá, D.C., Colombia  
Telephone: (571) 283 -0797  
Fax: (571) 283-0797

TABLE 1  
COLOMBIA: PRODUCTION OF MINERAL COMMODITIES<sup>1, 2</sup>

(Metric tons unless otherwise specified)

Commodity	1998	1999	2000	2001	2002
<b>METALS</b>					
Bauxite	-- <sup>r</sup>	-- <sup>r</sup>	-- <sup>r</sup>	-- <sup>r</sup>	--
Copper, mine output, Cu content	1,951 <sup>r</sup>	2,295	2,065 <sup>r</sup>	2,192 <sup>r</sup>	1,853
Gold kilograms	18,811 <sup>r</sup>	34,599 <sup>r</sup>	37,018	21,813	20,799
Iron and steel:					
Iron ore and concentrate thousand tons	526 <sup>r</sup>	576	660	637	688
Pig iron do.	256	264	285	319 <sup>r</sup>	309
Steel, crude do.	636	534	660	638 <sup>r</sup>	663
Semimanufactures, hot-rolled <sup>c</sup> do.	650	650	650	552 <sup>3</sup>	575 <sup>e</sup>
Lead:					
Mine output, Pb content	272	166	226	220 <sup>e</sup>	220 <sup>e</sup>
Refined (secondary) <sup>c</sup>	12,000	12,000	12,000	12,000	12,000
Nickel:					
Mine output, Ni content	29,422	39,274	58,927	52,962	58,196
Ferronickel, Ni content	28,185 <sup>r</sup>	28,265 <sup>r</sup>	27,736	38,446	43,987
Platinum kilograms	411	488	339	674	661
Silver do.	5,218	7,593	7,970	7,242	6,986
Zinc, mine output, Zn content	41	27	42	40 <sup>e</sup>	40 <sup>e</sup>
<b>INDUSTRIAL MINERALS</b>					
Asbestos, mine output <sup>c</sup>	136,000	136,000	136,000	136,000	136,000
Barite <sup>c</sup>	600	600	600	600	600
Cement, hydraulic thousand tons	9,190	9,200 <sup>e</sup>	9,750 <sup>e</sup>	6,830	6,604
Clays:					
Bentonite <sup>c</sup>	8,500	8,500	8,500	8,500	8,500
Common clay and kaolin <sup>c</sup> thousand tons	8,000	8,000	8,400	8,400	8,400
Diatomite <sup>c</sup>	4,000	4,000	4,000	4,000	4,000
Feldspar <sup>c</sup>	55,000	55,000	55,000	55,000	55,000
Fluorite <sup>c</sup>	800	800	800	800	800
Gemstones, emerald <sup>d</sup> thousand carats	9,360	6,800 <sup>r, e</sup>	8,454	5,499	5,390
Gypsum <sup>c</sup>	560,000	560,000	560,000	560,000	560,000
Lime, hydrated and quicklime thousand tons	13,000 <sup>r, e</sup>	13,000 <sup>r, e</sup>	13,000 <sup>r, e</sup>	11,472	10,624
Magnesite <sup>c</sup>	10,500	10,500	10,500	10,500	10,500
Mica <sup>c</sup>	55	55	55	55	55
Nitrogen, N content of ammonia	100,300	75,400	92,900	95,200	107,700
Phosphate rock	43,688	43,148	42,615	43,000	43,000
Salt:					
Rock	165,699	156,933	177,690	110,212	191,554
Marine	330,404	304,433	282,188	285,073	335,783
Total	496,103	461,366	459,878	395,285	527,337
Sodium compounds, n.e.s., sodium carbonate <sup>c</sup>	125,000	125,000	125,000	125,000	125,000
Stone and sand: <sup>c</sup>					
Calcite	6,500	6,500	6,500	6,500	6,500
Dolomite thousand tons	45	45	45	45	45
Limestone do.	14,409	10,933	11,987	11,475	10,624
Marble <sup>c</sup>	190,000	190,000	190,000	190,000	190,000
Sand, excluding metal-bearing	925,000	925,000	925,000	925,000	925,000
Sulfur:					
Native (from ore)	52,727	89,024	91,966	69,344	60,162
Byproduct, from petroleum <sup>c</sup>	15,000	16,000	16,000	15,465 <sup>r</sup>	15,500 <sup>e</sup>
Total <sup>c</sup>	67,727	105,024	107,966	85,344	75,162
Talc, soapstone, pyrophyllite <sup>c</sup>	15,000	15,000	15,000	15,000	15,000
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Carbon black <sup>c</sup>	24,000 <sup>3</sup>	24,000	24,000	24,000	24,000
Coal thousand tons	33,751	32,754	38,142	43,441 <sup>r</sup>	39,532
Coke, all types <sup>c</sup> do.	615	615	615	615	615

See footnotes at end of table.

TABLE 1--Continued  
COLOMBIA: PRODUCTION OF MINERAL COMMODITIES<sup>1, 2</sup>

(Metric tons unless otherwise specified)

Commodity	1998	1999	2000	2001	2002
MINERAL FUELS AND RELATED MATERIALS--Continued					
Gas, natural:					
Gross million cubic meters	20,743 <sup>r</sup>	30,064 <sup>r</sup>	34,023 <sup>r</sup>	35,850	33,789
Marketed do.	6,333 <sup>r</sup>	5,237 <sup>r</sup>	5,982 <sup>r</sup>	6,207 <sup>r</sup>	6,234
Natural gas liquids <sup>e</sup> thousand 42-gallon barrels	2,600	2,600	2,600	2,600	2,600 <sup>e</sup>
Petroleum:					
Crude thousand 42-gallon barrels	275,320 <sup>r</sup>	297,840	250,755 <sup>r</sup>	220,460	211,007
Refinery products:					
Liquefied petroleum gas do.	7,491	7,840 <sup>r</sup>	8,177 <sup>r</sup>	8,503 <sup>r</sup>	8,089
Gasoline:					
Aviation do.	145	183 <sup>r</sup>	147 <sup>r</sup>	142 <sup>r</sup>	69
Motor do.	38,371	40,605 <sup>r</sup>	41,636 <sup>r</sup>	43,259 <sup>r</sup>	39,775
Jet fuel do.	6,188	7,097 <sup>r</sup>	82,625 <sup>r</sup>	9,032 <sup>r</sup>	9,032
Kerosene do.	1,025	1,060 <sup>r</sup>	213 <sup>r</sup>	162 <sup>r</sup>	151
Medium distillate fuel oil do.	23,209	21,209 <sup>r</sup>	22,604 <sup>r</sup>	24,220 <sup>r</sup>	23,678
Lubricants do.	431	450 <sup>e</sup>	450 <sup>e</sup>	450 <sup>e</sup>	450 <sup>e</sup>
Residual fuel oil (Black oil) do.	18,759	20,797 <sup>r</sup>	19,408 <sup>r</sup>	20,639 <sup>r</sup>	20,767
Asphalt and bitumen do.	2,081	3,000 <sup>e</sup>	3,000 <sup>e</sup>	3,000 <sup>e</sup>	3,000 <sup>e</sup>
Refinery fuel and losses and unspecified do.	4,664	5,000 <sup>e</sup>	5,000 <sup>e</sup>	5,000 <sup>e</sup>	2,568
Total do.	102,364 <sup>r</sup>	103,693 <sup>r</sup>	106,160 <sup>r</sup>	110,544 <sup>r</sup>	105,579

<sup>e</sup> Estimated. <sup>r</sup> Revised.

<sup>1</sup> Includes data available through August 1, 2003.

<sup>2</sup> Estimated data are rounded to no more than three significant digits; may not add to the totals shown.

<sup>3</sup> Reported figure.

<sup>4</sup> Based on registered exports by the Banco de la República.

TABLE 2  
COLOMBIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2002

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Carbon black		Cabot Colombiana, S.A. (private, 100%)	Cartagena, Bolivar Department (plant)	NA.
Do.		Productos Petroquímicos, S.A. (private, 100%)	Cali, Valle del Cauca Department (two plants)	12.
Cement		Cía. Colombia de Clinker, S.A. (Colclinker) (private, 100%)	Cartagena, Bolivar Department (plant)	1,100.
Do.		Cementos Boyacá, S.A. (private, 100%)	Nobsa, Boyaca Department	NA.
Do.		CEMEX Colombia (100% CEMEX, S.A. de C.V.)	Five plants	4,800.
Do.		Cementos del Caribe, S.A. (private, 100%)	Barranquilla, Atlantico Department	1,000.
Do.		Cementos del Valle, S.A. (private, 100%)	Yumbo, Valle del Cauca Department	1,200.
Do.		Cementos Río Claro, S.A. (private, 100%)	Puerto Trifuno, Antioquia Department	1,750.
Coal		Carbones del Cerrejón, S.A. (Anglo American Plc; 33⅓% ; Glencor International AG, 33⅓%; and BHP Billiton Plc, 33⅓%)	Cerrejon Centro mines, Cerrejon Sur mines, Cerrejon Zona Norte, and Oreganal Mines, La Guajira Department	22,000.
Do.		Drummond, Ltd. (Drummond Co. Inc., 100%)	Drummond mine, Cesar Department	7,000.
Do.		Prodeco (private, 100%)	Calenturitas in Cesar Department	NA.
Do.		Acerías Paz del Río, S.A. (private, 100%)	Paz del Río, Boyaca Department (mine)	600.
Copper		Minera El Roble, S.A.	El Roble Mine, El Carmen, Choco Department	3.
Gemstones, emerald		Minerales de Colombia, S.A. (MINERALCO) (Government, 100%)	Chivor, Coscuez, Muzo, and Quipama Mines, Boyaca Department	NA.
Gold	kilograms	Frontino Gold Mines Ltd. (private, 100%)	El Silencio Mine, Segovia, Antioquia Department	1,500.
	do.	Fisher-Watt Gold Co. (private, 100%)	Oronorte Mine, Segovia, Antioquia Department	500.
Do.	do.	Mineros de Antioquia, S.A. (private, 100%)	Rio Nechi, near El Bagre, Antioquia Department (mines)	2,000.
Do.	do.	Small miners (cooperatives and individual prospectors)	do.	NA.
Iron ore		Acerías Paz del Río, S.A.	Paz del Río, Boyaca Department (mine)	800.
Kaolin		Cerámicas del Valle Ltda., (private, 100%)	Yumbo, Valle del Cauca Department (mine)	NA.
Natural gas	million cubic meters	Empresa Colombiana de Petróleos (ECOPETROL) (Government, 100%)	North coast, La Guajira Department (national gasfields)	4,500.
Do.	do.	International Petroleum Colombia, Ltd. (International Petroleum Corp., 100%)	Barrancabermeja locale, Antioquia and Santander Departments	2,200.
Nickel		Cerro Matoso, S.A. (QNI Ltd. 100%: latter owned by BHP Billiton Plc 100%).	Cerro Matoso mine, Montelíbano, Cordoba Department	55 plant.
Nitrogen		Abonos de Colombia (private, 100%)	Cartagena, Bolivar Department (plant)	100.
Do.		Monómeros Colombo-Venezolanos, S.A. (private, 100%)	Barranquilla, Atlantico Department (plant)	85.
Petroleum <sup>1</sup>	thousand 42-gallon barrels	Empresa Colombiana de Petróleos (ECOPETROL)	16 fields in various Departments	70,000.
Do.	do.	HOCOL, S.A.	14 fields in various Departments	36,500.
Petroleum products	do.	Empresa Colombiana de Petróleos (ECOPETROL)	Barrancabermeja refinery, Norte de Santander Department	74,400.
Do.	do.	Do.	Cartegena refinery, Bolivar Department	25,806.
Do.	do.	Do.	Tibu, Norte de Santander Department	1,825.
Do.	do.	Do.	Orito, Putumayo Department	875.
Phosphate		Fosfatos de Colombia, S.A. (private, 100%)	Neiva, Huila Department	30.
Do.		Fosfatos Boyacá, S.A. (Government, 100%)	Iza, Boyaca Department	20.
Platinum		Small miners (cooperatives and individual prospectors)	Rio San Juan, Choco Department	NA.
Salt, marine		Instituto de Fomento Industrial (IFI) (Government, 100%)	Manaure Salina, La Guajira Department	700.
Salt, rock		Concesión Salinas (Government, 100%)	Zipaquirá, Cundinamarca Department	500.

See footnote at end of table.



TABLE 2--Continued  
COLOMBIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2002

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Silver	kilograms	Frontino Gold Mines Ltd.	El Silencio Mine, Segovia, Antioquia Department	2,500.
Do.	do.	Small miners (individual prospectors and cooperatives)	Rio Nechi, Antioquia Department (mines)	2,000.
Steel:				
Integrated plant		Acerías Paz del Río, S.A.	Belencito, Boyaca Department	400.
Semi-integrated plants		Siderúrgica del Caribe (private, 100%)	Cartagena, Bolivar Department	NA.
Do.		Siderúrgica del Boyacá, S.A. (private, 100%)	Santa Fe de Bogota	NA.
Do.		Siderúrgica del Medellín, S.A. (private, 100%)	Medellín, Antioquia Department	NA.
Do.		Siderúrgica del Muna, S.A. (private, 100%)	Chusaca, Federal District	NA.
Do.		Siderúrgica del Pacífico, S.A. (private, 100%)	Cali, Valle del Cauca Department	NA.
Sulfur		Industrias Purace, S.A. (private, 100%)	El Vinagre Mine, Cauca Department	60.
Do.		Empresa Colombiana de Petróleos (ECOPETROL)	Barrancabermeja, Santander Department	29.

NA Not available.

<sup>1</sup>These two petroleum entries are examples only. Colombia has more than 3,000 producing wells drilled by Government and private companies; these wells have combined capacities that exceed 755,000 barrels per day of oil.